

CLAIMS

1. A pivoting fluid conduit joint comprising:
a socket;
a ball disposed in the socket for movement relative to the socket; and
a trunnion joining the ball and socket to permit relative pivoting movement
between the ball and socket about an axis defined by the trunnion.
5
2. The pivoting fluid conduit joint of claim 1, wherein the socket is upstream from the ball.
3. The pivoting fluid conduit joint of claim 1, wherein the socket is downstream from the ball.
10
4. The pivoting fluid conduit joint of claim 1, and further comprising a second trunnion aligned coaxially with the first trunnion.
5. The pivoting fluid conduit of claim 1, and further comprising:
a one-way brake.
15
6. The pivoting fluid conduit of claim 5, wherein the trunnion is fixed to the ball, and the one-way brake comprises:
a stepped sleeve operable to engage the trunnion;
a brake housing fixed to the socket and defining a cylindrical opening for receiving
the stepped sleeve, the brake housing and the stepped sleeve cooperate
20 to define a tapered slot having a wide end and a narrow end;
a cylinder disposed in the tapered slot; and
a spring disposed in the wide end of the tapered slot to urge the cylinder toward
the narrow end of the tapered slot.

7. The pivoting fluid conduit of claim 5, wherein the trunnion is fixed to the socket, and the one-way brake comprises:

- a stepped sleeve operable to engage the trunnion;
- a brake housing fixed to the ball and defining a cylindrical opening for receiving the stepped sleeve, the brake housing and the stepped sleeve cooperate to define a tapered slot having a wide end and a narrow end;
- 5 a cylinder disposed in the tapered slot; and
- a spring disposed in the wide end of the tapered slot to urge the cylinder toward the narrow end of the tapered slot.

10 8. A pivoting fluid conduit joint defining a conduit, comprising:

- a first socket;
- a first ball disposed in the first socket and pivotably joined to the first socket along a first axis;
- a second socket fixed to the first ball; and
- 15 a second ball disposed in the second socket and pivotably joined to the second socket along a second axis oriented at a substantially right angle to the first axis.

9. The pivoting fluid conduit joint of claim 8, and further comprising:

- a brake for resisting pivoting movement of the first ball relative to the first socket.

20

10. The pivoting fluid conduit of claim 9, wherein the trunnion is fixed to the first ball, and the brake comprises:

5 a stepped sleeve operable to engage the trunnion;

a brake housing fixed to the socket and defining a cylindrical opening for receiving the stepped sleeve, the brake housing and the stepped sleeve cooperate to define a tapered slot having a wide end and a narrow end;

a cylinder disposed in the tapered slot; and

10 a spring disposed in the wide end of the tapered slot to urge the cylinder toward the narrow end of the tapered slot.

11. The pivoting fluid conduit of claim 9, wherein the trunnion is fixed to the first socket, and the brake comprises:

15 a stepped sleeve operable to engage the trunnion;

a brake housing fixed to the ball and defining a cylindrical opening for receiving the stepped sleeve, the brake housing and the stepped sleeve cooperate to define a tapered slot having a wide end and a narrow end;

a cylinder disposed in the tapered slot; and

20 a spring disposed in the wide end of the tapered slot to urge the cylinder toward the narrow end of the tapered slot.

12. A monitor having a pivoting inlet joint, the pivoting inlet joint comprising:

25 a socket;

a ball disposed in the socket for movement relative to the socket; and

a trunnion joining the ball and socket to permit relative pivoting movement between the ball and the socket about an axis defined by the trunnion.

13. The monitor of claim 12, wherein the trunnion axis is substantially horizontal.

14. The monitor of claim 12, wherein the monitor is a portable firefighting monitor.